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## THE CRISIS FACTOR IN THINKING

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ARLAND D. WEEKS  
North Dakota Agricultural College

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In view of the fact that one reasons only when there are problems to be solved and that conditions of surprise provoke mental activity, and in view of the further fact that, historically, the greatest progress has been made when peoples have been plunged into new environments, as in America and Australasia, it is interesting to note current tendencies with reference to probable effects upon racial and individual initiative and reasoning.

It is no longer, if ever, necessary to understand principles and constructions to be able to use machinery. Commercial rivalry has resulted in the production of engines, watches, typewriters, and mechanisms of all sorts that require but a minimum of intelligent management. Many machines are put on the market "fool proof." Even the carton of breakfast wafers tells us where to open the box—"Cut on this line."

Along with the tendency on the part of manufacturers to minimize the need of mechanical insight on the part of the public, there is a centralizing of intelligence in managerial offices and a corresponding removal of problems from employees and agents. A dead level of almost automatic performance is forced upon factory employees, departmental workers, and quite generally upon salaried classes, not excluding even a large percentage of those employed in educational service. True, the individual of natural initiative may break through the organization and regimentation to which he is subject and achieve some measure of creative experience, but can it be doubted that the element of surprise and thought-compelling situations may diminish under modern conditions?

Contrast the regimented lives of city workers and persons whose activities are directed from central offices with the frontiersman's life, or with a single day of camping out. The improvising of utensils, the meeting of emergencies, and reactions to the unexpected,

give an exhilarating taste of a life which seems of a different world. The life of the frontier has given the world many of its most valuable assets, from Lincoln and Mark Twain to the Torrens title-registration law and the Australian ballot. And one may add that to peculiarly free conditions of nurture we must attribute much of the resourcefulness of Edison and Darwin.

It is common to refer to modern life as highly complex. This should not be taken to mean that the complexity is necessarily thought-compelling. Often quite the contrary. One's relations to this complex life may be so simple as to preclude those conditions of surprise required for intellectual advancement. The question to be asked is, to what extent does the individual find himself actually burdened with the problems arising out of modern life? If he shares but slightly or not at all in the management of the enterprise with which he is associated, if he is surrounded by authoritative rules and conventions, if his work is blocked out for him, it may be that anything like initiative and resourcefulness will be virtually out of the question. More grave than the economic menace of big business is the intellectual menace of centralized intelligence, represented by the management of vast enterprises from central offices, accompanied on the part of employees by rule-following self-effacement, mechanical compliance, and automatic performance. The arid intellectual atmosphere of large regimented groups in business and industry forms a striking phenomenon in society today. Business and industrial complexity certainly creates many problems, but by a centralized solution the rank and file of employees tend to become far less thoughtful than if they were scattered about pursuing individual and precarious vocations.

In contrast with industrial conditions which present fewer new situations compelling thought on the part of the rank and file, civic and political conditions seem now, as never before, to demand reasoning of the citizen. The psychological requirements for evoking the highest mental processes are fulfilled in the many problems of the day which knock at every door for solution.

In our many political problems appear both evidence of lack of skill in reasoning and promise of gaining that skill, provided the electorate is admitted to the practical solution of political prob-

lems, especially under direct legislation, and is not ultimately displaced by the governmental expert representing highly centralized political intelligence. If questions of government are thrown out to all voters, as in the pamphlet to voters in Oregon containing 40 measures under the initiative and referendum, there will surely exist sufficient opportunity for exercising popular thinking. If on the other hand, the average voter were to feel that he had no more part in the administration of society than has the factory employee and the newspaper reporter in the administration of the enterprises with which they are connected, one of the greatest opportunities for developing resourcefulness and reasoning ever presented would be lost. The mental welfare of the race demands that political questions be increasingly forced upon the electorate, and that the electorate be expanded to include those who have minds to develop.

It is not to be inferred that situations of surprise immediately elicit reasoning of good quality or even reasoning at all. A cry of fire throws many into random and hysterical actions. Repeated experiences with fires, however, produce more intelligent reaction.

The persistence of strikes is an evidence of inability to respond to historically new situations by thinking. Strikes suggest the random, ill-co-ordinated actions of a horse frightened at a newspaper, or the embarrassment of a schoolboy before an unexpected question. A strike is a short-sighted method of securing economic justice. The efficient method of striking by votes and expressing demands through the established channels, through laws, implies a connectedness of thinking that has not yet been fully attained.

The election of mutually incongruous representatives by equal majorities of the same voters is an evidence to the same end. The preference for indirect rather than direct taxation and the assent to specious arguments for war are significant. To these might be added a multitude of vote-winning tricks with which the practical politician is familiar but which are a reflection upon the analytic intelligence of those influenced.

That the new situations of the day in civic affairs have found the public unprepared for their rational solution, and that even leaders who might otherwise be statesmen are found lacking in administrative ability of the highest grade is evidenced by failures

of government. The object-minded man, the man trained too narrowly in the methods of money-making businesses, the man who never had any use for the intangible and the theoretical, and the man whose mind has never been subjected to the discipline of abstractions in literature and liberal science are largely responsible for the bunglings of legislation and the absence of consistent and real statesmanship. One of the most hopeful signs of the times, however, is that the people are turning instinctively for guidance to the university doctrinaire who but a few years ago would have been contemptuously retired in favor of the "practical" man.

Under the leadership of wise theorists the extent to which the general public may gain power to deal with the principles of social administration will no doubt prove remarkable. Uninstructed, the average man feels inadequate to the problems of political science. But the celerity with which considerable numbers get hold of general principles and theory in ethical and sociological fields proves the possibilities of popular thinking. The essential conditions are the imminence of new situations, the feeling of serious personal responsibility for their proper solution, and a fair amount of intellectual leadership. Too heavy problems thrown at once upon an unprepared public lead to discouragement and irrational response. Under right leadership the popular reactions to conditions of social surprises are increasingly rational, and the intellectual development of the race demands both the problem and the thoughtful reaction.

To insure the full benefits of new situations as compelling thinking there must be a willingness to attack difficulties. The presence of new situations does not mean much for thinking unless these are such as cannot be avoided or such as the individual elects to grapple with. Unwillingness to grapple with difficulties and undergo mental stress and strain, which appears especially in levels of luxury, and affects great numbers of young people unwisely brought up, is a bar to the evolution of intelligence. The spirit to find novel situations with which to grapple is, from the standpoint of mind in evolution, most admirable of all.

The part played by education in developing reasoning should be unambiguous. Nowhere should there be presented so many new situations and conditions of surprise as afforded by education. The school may provide more problems in an hour than the student

would consciously meet elsewhere in months. From one point of view the schools are agencies to precipitate upon students unexpected situations and thought-compelling emergencies. The very nature of education for thinking implies that stubborn problems surprise the student at every turn. To the extent to which the student picks his way easily through a course, to that extent he is deprived of the invaluable experience of being compelled to think. A curriculum should represent a gauntlet of emergencies, each necessitating initiative, resolution, a grasp of new relations, resourcefulness, mental readjustment, and constructive thinking.

One who deals with students must observe that the higher processes seem to be largely unexercised in many cases. Whether less exercised than formerly may be a matter of debate. But there can be no doubt as to the meaning of certain facts and certain tendencies.

The essentially uneducated university graduate is not a myth. When one can tell neither by range of interests nor sureness of diction and thought whether a suspect is a university product or not, there is reason for pause. The fact stated by James Bryce recently, that the greatest advances in science have been made by men not trained as specialists, suggests a question as to the possibility of producing broad thinkers by intensive specialization. The gaining of the whip hand over the faculty by student interests, representing spectacular athletics and social diversion and social caste supported by wealth that discredits the impecunious professor, tends to make it difficult for instructors to hold students to grinding tasks. The instructor is perhaps more likely to find that he is subjected to problems by the student than that he is subjecting the student to thought-compelling conditions.

While thinking rests upon information, the proportion of information to thinking is a vital point. The educational world is emphasizing information as never before. This emphasis appears in attention paid to the kinds of knowledge regarded as most useful and in fulness of data and details in bulky departmental courses and swollen syllabi. It is even not yet a crime for a writer to take more pages than his contribution to thought actually demands. Whole volumes appear devoted to the expansion of a single proposition which an intelligent reader could grasp in a few moments.

Over-elaboration of details leaves little need to fill in outlines and tax one's own inventiveness. An excessive amount of reference reading and the lecture system alike emphasize mass of material at the possible expense of thought activity.

As an example of an almost perfect educational situation the hypothetical case of the law schools suggests itself. Here the student is called upon to apply known principles to a new set of facts. He must meet an emergency with the aid of memory, but with the inevitable use of reasoning. Were the example of the hypothetical case more freely followed in general classes, instructors would less frequently encounter chambers of vacuity in the student's mind or sink through a quicksand of feeble associations, illustrated by the inability of a college student to decide whether any of her relatives were living two thousand years ago.

Society has a right to look to education to maintain standards of reasoning. If it fails here there is nothing in education to guarantee that along with the diffusion of useful data there will not ensue a dearth of inventiveness and a decline of civilization. A spurious educational activity is conceivable unattended by real intellectual improvement.

Assuming the dementing influences of centralized industry, and cognizant of the distrust of popular ability to assume the duties logically devolving upon democratic citizenship, one realizes the importance of the question of the sufficiency of education to provide effective demands upon the higher mental powers. If our complex life is actually an increasingly simple and unexacting life for the individual, and if living is to become steadily easier in demands upon thought, the importance of assuring every individual insistent problems is not to be underrated.

Railroad tickets are delivered at the door, and the exigencies of travel quite forestalled. Every care and worry are taken over by agents and experts—for a consideration. Struggle and confusion, judgment and enforced experimentation are ruled out by over-prosperous parents and coddling functionaries. It was never more easy for a simpleton to live. But let us not forget that an easy environment, with few conditions of surprise, throws the individual down to the lower reactions and swings the beam toward devolution and degeneracy.